



The Minuteman Repeater Association

A non-profit organization providing communications infrastructure and volunteers for community and emergency events.



The Minuteman

Volume 49, Number 4

March 2020

Wednesday, 18 March, 2020 ~ Membership Meeting **Note: 7:00 PM Start**

SKYWARN Training Rob Macedo,

KD1CY

Location: Leominster EMA Amphitheater , 37 Carter

Street, Leominster, Ma, 01453 (see p.11)

NOTE: this is a public training event. MMRA ensure space:

members SHOULD preregister to

The National Weather Service (NWS) in setts will be sponsoring a severe session, part of its SKYWARN pro-

Boston/Norton Massachu-
weather spotter training
gram.

The session is open to the public erators, which comprise one the NWS Boston/Norton police, fire, and other tend. Everyone age training will be able

at no charge. Amateur Radio Op-
third of all SKYWARN Spotters in
coverage area, Emergency managers,
first responders are encouraged to at-
16 and older who stays to complete the
to become trained NWS weather spotters.

The training session presentation, which dis-
for "severe" thunderstorms,
derstorms and tornados. Addi-
and proper snow measurement

includes a two-hour thirty-minute computer-based
cusses the development of thunderstorms, the criteria
as well as the cloud features associated with severe thun-
ditional information will be presented about winter storms
and reporting of coastal flooding, river, stream, and urban

**Cancelled by the
National Weather
Service**

Continued on Page 3

Annual Elections are in May

We have two openings: Director and Clerk

You can read the responsibilities in our bylaws:

https://www.mmra.org/mmra_bylaws_approved_11_30_2012.pdf

...or MMRA.ORG >> About MMRA >> Bylaws

**Please read them if you are interested, and let Dave,
N1DCH, know of your interest.**

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About the Minuteman Repeater Association

MMRA Control Operators Responsibilities

<https://www.mmra.org/MMRACOPolicy-March2019.pdf>

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA maintains a large system of repeaters in Eastern Massachusetts.

The MMRA meets each month from September to June. Meeting times, locations, and talk-in frequency vary and are announced in this newsletter and on weekly nets. Meetings are open to all interested parties. Guest speakers and programs of general interest occur in September, November, January, March, and May. The intervening meetings are also open to all members and are for general business.

The Minuteman newsletter is emailed one week before each general interest meeting. Members are encouraged to submit articles: send to the editor at newsletter@mmra.org. The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8PM the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". Join us!

Membership in the MMRA is open to all radio amateurs. Annual dues are \$25 per individual or \$35 per family. See our website for details.

Contact information is listed on the top of the last page of this newsletter.

No part of this newsletter can be copied or posted elsewhere without prior approval from the club.

MMRA QRM Policy

MMRA members and all other operators are strongly encouraged to report repeater activity that does not abide by Part 97 rules or accepted amateur radio practice to the board of directors at contact@mmra.org or via other means.

The most effective way (and probably the only effective way) to deal with an individual causing QRM is to NOT engage that individual on the air. Please include the time and date of any incident.

Repeater and Frequency Information

Band	XMTR Location	Freq	PL	Call	Linking	
					To Hub 1	To Hub 2
MMRA Voice Repeaters						
10m	Marlboro East	29.680	131.8	W1MRA	PTL	PTL
6m	Marlboro East <i>Rmt receive Marlboro West: PL=100</i>	53.810	71.9	W1BRI	PTL	PTL
2m	Brookline	145.160	na	K1MRA	D-Star (REF050C)	
	Belmont	145.430	146.2	KC1CLA	PTL	FTL: DARI
	Mendon	146.610		K1KWP	FTL	PTL
	Quincy	146.670		W1BRI	PTL	PTL
	North Reading	146.715		KC1US	PTL	PTL
	Weston	146.790		N1BE	PTL	PTL
	Boston <i>Remote receive in Brookline Boston: PL = 127.3</i>	146.820		K1BOS	FTL	PTL
	Marlborough	147.270	146.2	W1MRA	PTL	PTL
1½m	Marlborough	223.940	103.5	W1MRA	PTL	FTL
	Quincy	224.400		N1KUG	PTL	FTL
	Weston	224.700		N1NOM	PTL	FTL
	Burlington	224.880		KC1US	PTL	FTL
70cm	Lowell	442.250	88.5	K1LVF	FTL	PTL: 446.775
	Weston *	442.700		N1DCH	Network Hub 2 (PTL to Hub 1)	
	North Reading	446.775		W1DYJ	FTL	PTL
	Marlborough	448.225	na	W1MRA	D-Star (REF050C)	
	Hopkington	449.575	88.5	W1BRI	PTL	PTL
	Marlborough *	449.925		W1MRA	Network Hub 1	
33cm	Boston *	927.0625	D244	K1RJZ	PTL	PTL
	Marlborough *	927.700 PL out = 131.8		W1MRA	PTL	PTL
Marlborough		144.390	none	W1MRA	APRS Digipeater	
???		145.630	146.2	W1MRA	Fox Box	
*Internet	HUB1- 449.925: IRLP node 4133 / Echolink node 4133 Connected to Echolink NEWENG2 conference (9127) for TIAOS net.					
	HUB2 - 442.700: IRLP node 4136 / Echolink node 4136 Connected to 220 Reflector 9124 on Tuesdays					
	927.0625: IRLP 4977			Normally linked to the NE900 Reflector, 9125. Linked to MMRA via IRLP node 4134 for the TIAOS net. Normally linked together.		
	927.700: IRLP 4978					

Notes: FTL = Full Time Linked (or default state) PTL = Part Time Linked (on schedule or demand)

President's Corner ~ David Hornbaker, N1DCH

The MMRA VE team administered 17 exams at the Algonquin Amateur Radio Club (AARC) Flea Market in Marlborough. There were 14 new licenses or upgrades. Congratulations to Jason, W1HFP (MMRA secretary) who passed element 4 and became an Extra. One person, Marc Beneck, AC1IZ, passed all three license elements and went from zero to Extra, congratulations to Marc.

If you are interested in attending the SKYWARN training at this month's membership meeting, please remember to pre-register.

Thanks to Bob, K1IW, Bob, N1BE, and Bruce, KC1US for setting up and running the MMRA table at the AARC Flea Market. Also, thanks to Bob, N1BE for donating additional stuff to sell. The table generated \$238 in sales.

Also, special thanks Bob, K1IW and Bryan, W1BRI for their continued work to keep the repeaters in top shape.

I look forward to seeing you at the Membership meeting on the 18th!

Please join us Tuesday nights on the TloS net.

73

DE N1DCH

Wednesday, 18 March, 2020 ~ Membership Meeting *Note: 7:00 PM Start* SKYWARN Training Rob Macedo, KD1CY

Rob Macedo (Amateur Radio Call-Sign: KD1CY) was born and raised in Saratoga Springs, NY and moved to New Bedford, MA for college in 1991, where he went to UMASS-Dartmouth and graduated with an Electrical Engineering degree. He works at Dell Technologies where he has been for over 24 years. Rob is a senior principle hardware engineer and former Director of System Integration in the Drive Storage Media Engineering (DSME) department where he previously managed a global team of engineers working on disk drive and Solid State Drive evaluation in Dell-EMC products and now is a technical lead in this area working with the same global team of system integration engineers. Rob has always had a very strong interest in technology, meteorology, emergency management, emergency and public service event communications. Rob has been the Amateur Radio Emergency Services (ARES) SKYWARN Coordinator for NWS Boston/Norton (previously Taunton) for 23 years and is the Eastern Massachusetts ARES Section Emergency Coordinator. When he is not at work or doing Amateur Radio public service, emergency communications and weather spotting volunteer work, Rob enjoys movies, shows, time with family and friends, as well as sporting events.

Treasurer's Report ~ Kevin Paetzold, K1KWP

Recent Donations

In newsletters we have been listing donations. To continue that acknowledgment on behalf of the MMRA board and the MMRA membership we would like to thank the individuals below for their recent donations (since the newsletter that came out in November 2019.):

K5TEC K1CPD KG1H KD1CY KW1U K1VK AB1II N1BE

Membership Report/Renewals

The MMRA membership year runs from September 1 until August 31 of each year. There is a grace period for those who have not renewed from September 1 until January 1. Unless you renewed for 2019-2020 (or later) your membership expired on August 31, 2019 and the grace period ended on 1/1/2020.

As of this writing 218 members have renewed or joined for 2019-2020. This is an increase of 28 from the 190 people renewed or joined in the previous year. 59 members have already renewed for the 2020-2021 year.

147.27 Slygo Power Repaired ~ Bryan Cerqua, W1BRI

The power supply for our 147.27 repeater at the Slygo site has been acting up and giving false positive alarms for quite some time. Bryan, our [Technical Officer Emeritus](#) (apparently he really hasn't retired) fixed it.

From Bryan: Installed the power interrupter box today at Slygo for the 147.27 repeater and made some measurements. The battery seems to be holding up OK in TX mode.

Additions are a small box with green LED panel meter that shows power state and has a big cap and diode to keep the 7330 controller from re-booting upon loss of AC power, ie hold up circuits. Also re-built the box that has the AC mains cut out relay and it also has a green AC power OK light. -- Done for now / Bryan



15 February VEC results ~ Dave Hornbaker, N1DCH

We had one candidate this morning that passed all three elements and gained extra in one day. Marc Beneck was also the first person today to pass both Technician & General, which means he won a new radio from the Algonquin ARC.

Also, congratulations to Jason, W1HFP (our Secretary) who passed element 4 today! (*The Extra License*)

Photo, Left to Right:

Henry Piel KQ1V (Donated Radio)

Mike Powell W1KU (AARC President)

Marc Beneck (Winner, License Sweep from 0 to Extra in 1 sitting).

Dave Hornbaker N1DCH

Bill Wade K1IJ - (ARRL VEC Liaison)

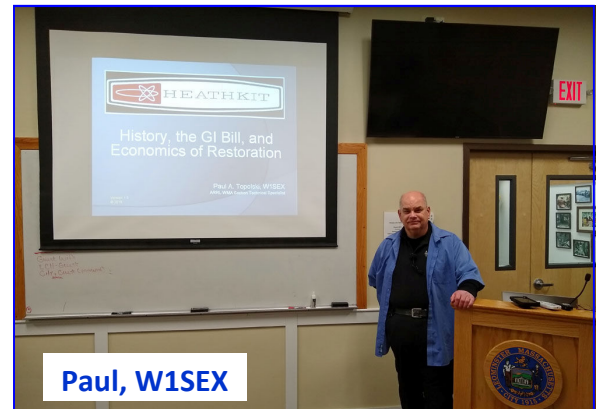


Photo credit Joe Reynolds KA1GDQ

20 January 2020 Membership Meeting Larry Banks, W1DYJ ~ Clerk *pro-tem*

Our last membership meeting was held at the Leominster EMA Amphitheater, 37 Carter Street, Leominster, Ma. The topic: **Heath History, the GI Bill, and Economics of Restoration with Paul Topolski, W1SEX**. Here are a few of Paul's 55 slide's. I can

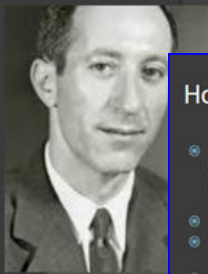
send you the full slide deck if requested.



Paul, W1SEX

Edward Bayard Heath

- Friend of Charles Lindberg
- Loved aviation and had a flair for design
- Won many national competitions in his Parasol and Baby Bullet planes
- Sold **blue prints, kits, and completed aircraft** costing \$100 to \$1,000 (less engine) in 1925 (\$1,500 to \$15,000 in 2019)
- Had a flying school
- Died in February, 1931 **test flying** a new low wing design



Howard Anthony

- 1935 Howard married Clinkin's secretary Helen and **bought the company at IRS auction for \$300 (\$5,600)**.
- Interest in flying and **electronics**
- **Moved** company to Benton Harbor
- **Published** the "Heath Beacon" for aviation, slogan "Heath Supplies The Man Who Flies"
- First **electronics** were an aircraft receiver followed by a **transmitter** made by Meissner (not in kit form)
- Provided non-strategic aircraft materials during World War II



Howard Anthony

- In 1952 Heath branched into the Hi-Fi market
- In 1954 the Heathkit AT-1 transmitter was born

The GI Bill

- An important factor in Heath's explosive growth was the GI Bill
- During WWII Congress passed The **Servicemen's Readjustment Act of 1944**, commonly known as the GI Bill
- Of the surviving 16 million service members, **8 million** took advantage of the GI Bill
- Within a week of VJ Day, most **all military contracts** were canceled plunging the country into **recession** for eight months
- While not all returning servicemen took advantage of the educational benefits of the bill, the **recession encouraged significant numbers** to do so

The Decline of Heath

- The Transistor
 - The single most **costly** component of electronic devices was the **human assembling** the product
 - Prior to printed circuit boards **half** the cost of a product would be the labor assembling it
 - Simply, the evolution of **solid state** technology which offered **miniaturization** of circuits and more importantly the **automation** of assembly, the transistor would reduce labor costs down to almost zero

The Decline of Heath

- Once the cost savings in assembling your own kit was gone it no **longer made sense to build a Heathkit**, even for the die-hard enthusiast

Why Was Heath Successful

- Slogan: "We won't let you fail," **superior customer support**
- Pay-over-time plans
- Well designed electronic **products**
- Well designed **kits**
- **Superior documentation**
- Cost effective, up to 50% less than manufactured products
- Post WW II **pent up demand** for electronics training, test equipment, and electronic consumer goods
- A long economic boom lasting from 1946 to 1973 provided time to enjoy life and money to **spend on hobbies**
- Sound business practices especially in **marketing and procurement**

Restoring Heathkits

- Let's examine the economics
 - HW-101
 - Average eBay cost of a HW-101 is \$120
 - Average eBay cost of a HP-23 is \$80
 - Total cost is **\$200**
 - Potential restoration cost is **\$90** to \$240
 - Lots of ham radio fun for **\$290** to \$440
 - SB-200
 - Average eBay cost of a SB-200 is **\$360**
 - Potential restoration cost is **\$150** to \$330
 - Lots more ham radio fun for **\$510** to \$690
 - **Imagine a casual operators' pile-up busting station for as little as \$800**

19 February 2019 Business Meeting Minutes

Larry Banks, W1DYJ ~ Clerk pro-tem

By Teleconference: In attendance: Dave, N1DCH; Kevin, K1KWP; Jason, W1HFP; James, N1DDK; John, WA1MDD; Bob, N1BE, Bruce, KC1US; Bob, K1IW, Larry, W1DYJ. Called to order at 7:30

Agenda

Mt. Wachusett repeater

The Mt Wachusett 70 cm repeater, W3DEC, has been linked to our TlaOS net in the past but appears to be broken. There have been suggestions that the MMRA look into adding this to our stable. John, KF1KI, volunteered to look into this. Here is the information he gathered:

Both W3DEC and W1SEX were not employees, but were affiliated with FEMA, and together they designed and built the repeater. Around 18 months ago, the antenna and/or feed line was damaged.

W1SEX has built enthusiasm for its repair in two hams who work for FEMA at their Region 1 headquarters in Maynard. FEMA is VERY supportive of having that repeater operational. FEMA is also eager to restore the link to the MMRA system, so we can count on adding it back once repairs are completed.

The repeater should be restored to service next summer. Since repair is not an emergency, access to the tower and repeater building is delayed by the snow and by federal restrictions on access, because the building is shared with several federal agencies.

FEMA has purchased a Quantar controller for the repeater. FEMA, or the federal agency which owns the shelter, insists that only a federally contracted tower climber can install a new antenna and feed line. Coordinating that work will be the biggest task.

The repeater will probably be operated by the Mohawk Amateur Radio Club with W1SEX as trustee and owned by MARC or by FEMA.

In April, when the snow clears (I can see the peak from here) I will start gently prodding the players for information and to remind them of our interest in reestablishing the link.

It therefore appears that this is under control and will be available at some time in the future.

Repeater update

Completed:

Reduced internet expenses to one Tello paid connection (\$5/month). The other four connections have been changed to FreedomPop "Free" Service (Bob)

'27 link radio replaced (Bob, Bryan)

The 30 year-old HUB2 receiver was replaced with a 15 year-old receiver (Bob)

MRW Power Detect rebuilt to prevent false positives (Bryan)

Coming next:

MDN – Upgrade ready to implement will do late March/early April (Bob/Bryan)

BBY (Pru) – Need to replace tone encoder (again) – need to arrange with K1BOS or Dave@WCVB (Bob/John) *[From Bob, K1IW, 25 February: The tone encoder on 146.82 has been repaired. Tone is 146.2 in and out for maximum coverage using the Brookline receiver. When in downtown Boston, the local Pru receiver can be accessed with 127.3 (but the output tone will still be 146.2). Thanks to K1BOS for helping out.]*

BEL – Link radio & antenna broken. Replacements are ready: will do mid-March. Not sure if receiver is working right. (Bob/Bruce) **[Discussion – should be moved to another site someday]**

BUR – needed new receiver crystal – Bruce to install soon (Bruce)

WES – cleanup (pending board vote – Bob + 2-3 others) **Moved, Seconded, & approved.**

Purchase a Yaesu DR1X used to be a backup repeater

Yaesu is running another special on System Fusion repeaters: a DR2K for \$700. Should we purchase one as a backup? This generated discussion regarding DMR, what Fusion repeater made sense, etc. Given the cost, a membership vote at the May meeting would be required. Further discussion is warranted.

HOWEVER – this generated a discussion about DMR: should we add a DMR repeater? What group (DMR-

December 2019 Business Meeting Minutes ~ continued

MARC or Brandmeister) should it be on? What repeater should be DMR? Should the Fusion repeaters be improved before adding DMR? Much discussion is needed before taking any action.

Echolink audio (W1BRI mentioned poor audio)

With only one report of this, and most reports indicating the audio was fine, this was tabled for now.

Database issues

Kevin, Jason, and Dave report that there still appear to be issues with membership accuracy. Bob requested a data record of such inaccuracy so he could track it down.

Planning for HamXposition 2020

The move to Marlboro and a new hotel generates some ambiguity for MMRA's needs. A request for a room (as we have had in the past) was made verbally to Bob, K1IW. Bob will be following up. We may be in the same (larger) room as W1A, which could be an advantage for both W1A and the MMRA.

It is hoped that the talk-in transmit/receive situation will be better than from Boxboro as the location is closer to 147.27, but it was pointed out it was in a hole. Testing is probably required.

Annual Raffle: **Moved, seconded, and approved to allocate up to \$500 for three items to be determined.**

Dave will request the usual Sunday timeslot for our meeting and raffle. *(Done after meeting.)*

Weston Junk removal

Bob has arranged for an electronics recycler to pick up the items at Weston. Bob is looking for volunteers to be at Weston at 9 AM on 4 March for two hours.

Elections

Two positions will need to be filled. Clark, (director) has indicated he will not be up for reelection. Our Clerk position is empty. **[Note: Kevin will send to the State our Annual Report, which is now late.]** All other positions are covered. Larry will add this to the newsletter with a brief statement of requirements from the bylaws.

Future Meetings

March – SKYWARN Training Note: 7:00 PM start	Microsoft Burlington
April – Business Meeting	New England Sci-Tech, Natick
May – W1DYJ Antenna Modeling	Campion Center, Weston.
June – Business Meeting	Marlborough Central Fire Station
July – HamXPosition	
September – W1SEX Oscilloscope presentation	Leominster EMA
November – Jeremy - KB1REQ - Mobile (motor vehicle) radio installations	
New England Sci-Tech	

Treasurers Report

Kevin gave his usual excellent update to our finances. We remain in good financial health. A more detailed report will be in the May newsletter.

Other Business

The attendees congratulated Jason, W1HFP, for obtaining his Amateur Extra license.

Newsletter

Please get newsletter content to Larry by 28 February

Meeting adjourned at ~8:45 pm.

Submitted by Larry Banks, Clerk pro-tem

Mike Raisbeck, K1TWF, Elected to ARRL First Vice President

This information provided by the ARRL

Many of you may know or know of Mike Reisbeck, K1TWF. He is a mover and shaker in the NEARFEST Hamvention and the Northeast HamXposition conventions. The ARRL Board of Directors elected Mike as First Vice President during its January 17-18, 2020 meeting in Connecticut.

Mike was first licensed in 1961 as KN1TWF, becoming K1TWF in 1962, and has held that call ever since. On the air activities include DXing, contesting, and recently, caring for a DMR repeater in his attic. He is a Volunteer Examiner and a Volunteer Counsel.



Also of interest to Mike are the social and organizational aspects of the Amateur Radio. For over 20 years he has been serving on the Board for the ARRL New England Division Convention, and he is currently president of that organization, which runs an annual convention and funds a number of scholarships to young hams every year. His new post leaves the office of New England Vice Director—a position in which he previously served—vacant for the present.

Distracted Driving Law ~ Update

From the Eastern Mass ARRL Section News:

The best way to avoid being ticketed for your lawful use of amateur radio while mobile is to have the appropriate documentation in the vehicle with you. The first item to print out and have with you in the car is the actual text of the Massachusetts General Law on the subject. That would be MGL Part 1, Title XIV, Chapter 90, Section 13. The second item is your valid FCC amateur radio license.

More detail and a link to the law:

[<https://ema.arrl.org/important-information-on-new-massachusetts-distracted-driving-law/>](https://ema.arrl.org/important-information-on-new-massachusetts-distracted-driving-law/)

Weston Cleanout

Bob, K1IW, arranged for an Electronics Recycler to take away much of the “junk” from our Weston repeater site. Thanks to Bob, and to Bryan, W1BRI, Bob, N1BE, and Bob, K5TEK for doing the hard work!

W1BRI Photos





SEACOAST AMATEUR RADIO FLEA MARKET



SPONSORED BY THE PORT CITY AMATEUR RADIO CLUB

SATURDAY APRIL 4, 2020 8:00AM-12:00PM

**ST. JAMES MASONIC LODGE
77 TIDE MILL ROAD HAMPTON, NH 03842
Talk In: 145.150- PL 127.3**

\$\$ Buy - Sell - Barter \$\$
New And Used HAM Radio Electronics & Accessories

Admission- \$5.00 per Person, Children Under 12 Free

- Ticket Holders Eligible For Hourly Door Prizes & Grand Prize Drawing
- Additional Prize Tickets May Be Purchased For \$5.00 Each
 - Grand Prize Winner Need Not Be Present
- All Other Winners Must Be Present At Time Of Drawing

Food & Beverage Available For Purchase

**** Amateur Radio License Exam Session Following Flea Market ****

\$\$ SELLERS \$\$

25 Indoor Tables- \$10.00 Each

10 Outside Tailgate Spaces- \$10.00 Each

- Robust Event Marketing Via Multiple Media Outlets
 - Fee Includes 1 Entry/Prize Drawing Ticket
 - Event Location Available For Set-up at 7:00am
- Event Breakdown Must Be Completed by 1:00pm For Exam Session

To Reserve Indoor Tables Or Tailgate Spaces In Advance Please Complete The Application Form Available At www.w1wqm.org. Submit Form And Non Refundable Payment In Full By 03/15/2020

For more information contact Steve Roberts KC1ILT at kc1ilt@maine.rr.com
or the PCARC at fleamarket@w1wqm.org
www.w1wqm.org

Upcoming MMRA Meetings

Note: Meeting locations and times are subject to change.

Consult the MMRA website for the most up-to-date information.
Teleconference numbers will be available one week before a business meeting—if you wish to attend, email contact@mmra.org.

Sunday, 8 Sept ~ Northeast HamXposition @ Boxboro Noon

Wednesday, 18 September ~ Membership Meeting ~ 7:30 PM
Two Ideas for Skyhooks Larry Banks, W1DYJ
Location: New England Sci-Tech Inc., Natick

Wednesday, 16 October ~ Business Meeting ~ 7:30 PM
Location: New England Sci-Tech Inc., Natick + Teleconference

Wednesday, 20 November ~ Membership Meeting ~ 7:30 PM
Amateur Radio Tower Safety: Is It Time for Change? Jim Idelson ~ K1IR
Location: Marlborough Central Fire Station

Wednesday, 18 December ~ Business Meeting ~ 7:30 PM
Location: Marlborough Central Fire Station + Teleconference

Wednesday, 15 January ~ Membership Meeting ~ 7:30 PM
Speaker/Topic: Paul Topolski, W1SEX, Heathkit: History and Restoration
Location: Leominster EMA

Wednesday, 19 February ~ Business Meeting ~ 7:30 PM
Location: Teleconference

Wednesday, 18 March ~ Membership Meeting **Note: 7:00 PM Start**
SKYWARN Training Rob Macedo, KD1CY
Location: Leominster EMA

Wednesday, 15 April ~ Business Meeting ~ 7:30 PM
New England Sci-Tech Inc., Natick + Teleconference

Wednesday, 20 May ~ Annual Meeting & Elections ~ 7:30 PM
Antenna Modeling: TLW, YW, HFTA, and EZNEC Larry Banks, W1DYJ
Location: Campion Center, Weston

Wednesday, 17 June ~ Business Meeting ~ 7:30 PM
Location: Marlborough Central Fire Station + Teleconference

Don't Forget! Join Us.

Every Tuesday @ 8 PM

Technical, Informational and Other Stuff Net

The MMRA's repeaters are linked Tuesday nights for the TIOS Net. Keep up with what's happening in the MMRA and ask your ham related questions.

Net Control Operators:

Week 1	W1DYJ	Larry Banks
Week 2	WA1JIM	Jimmy Devaire
Week 3	KC1CLA	Ed Curley
Week 4	K1KWP	Kevin Paetzold
Week 5	KB1OQA	Tom Turner
Substitute	K1BTZ	Jonathan Traum

To connect using Echolink / IRLP during the Net:

- Echolink Conference *NEW-ENG2*
- IRLP node 4133

MMRA Leaders

Executive Board — Officers

President	Dave Hornbaker	N1DCH
Vice President	John Spencer	WA1MDD
Secretary	Jason Peardon	W1HFP
Treasurer	Kevin Paetzold	K1KWP
Clerk	Charles Miller	KC1JUO

Executive Board — Directors

Director »2020	Clark Conti	N1NVK
Director »2020	James Lee	N1DDK
Director »2021	Bob DeMattia	K1IW
Director »2021	Roger Coulson	WA1NVC

Technical Officer

Technical Officer	Bob DeMattia	K1IW
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President Emeritus

Bob DeMattia	K1IW
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Technical Officer Emeritus

Bryan Cerqua	W1BRI
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Repeater Trustees

* Belmont 145.43	Ed Curley	KC1CLA
* Boston 146.82	John Mullaney	K1BOS
* Boston 927.0625	Rick Zach	K1RJZ
* Brookline 145.16	Joyce DeMattia	K1IWW
* Brookline Rcv 146.82	Bob Phinney	K5TEC
* Burlington 224.88	Bruce Pigott	KC1US
* Hopkinton 449.575	Bryan Cerqua	W1BRI
* Lowell 442.25	Vince De La Flor	K1LVF
* Marlborough 53.81	Bryan Cerqua	W1BRI
* Marlborough: 29.68, 144.39, 147.27, 223.94, 448.225, 449.925, 927.70 : all as W1MRA—Bill Northup	N1QPR	
* Mendon 146.61	Kevin Paetzold	K1KWP
* N. Reading 146.715	Bruce Pigott	KC1US
* N. Reading 446.775	Larry Banks	W1DYJ
* Quincy 224.40	Bill Dunn	N1KUG
* Quincy 146.67	Bryan Cerqua	W1BRI
* Weston 146.79	Bob Evans	N1BE
* Weston 224.70	Eddie Mulhern	N1NOM
* Weston 442.70	Dave Hornbaker	N1DCH

Additional, non-Voting

* Newsletter Editor	Larry Banks	W1DYJ
* Emerg. Coord.	Kevin Paetzold	K1KWP
* Pub. Serv. Coord.	Bruce Pigott	KC1US
* VEC Liaison	Bill Wade	K1IJ
* Net Manager	Larry Banks	W1DYJ
* Web Page Editor	Bob DeMattia	K1IW

* Appointed

Contacting the MMRA



Members: MMRA@yahoogroups.com

Note: This may take some time.

You must be approved by the moderator.

Officers: contact@mmra.org

Control Ops: control-ops@mmra.org



<http://www.mmra.org/>



@mmraham



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Ask your friends to become a member

Just let them know that it is not fully automated. Although they can log into the MMRA website immediately, they need to be manually processed. This could take up to week.

If you haven't updated your MMRA profile in a while, now is the time!

Go to < [MMRA.ORG](http://www.mmra.org) > and log in to do so.

Previous issues of the MMRA Newsletter are available at:

www.mmra.org > [Newsletter Archive](#) (on the left)

MMRA VE Sessions

Check here for the schedule:

<http://www.mmra.org/exam.html>

Contact: Bill Wade, K1IJ 617-699-3670

Directions to Leominster EMA Amphitheater , 37 Carter Street, Leominster, Ma, 01453

For more information, see < <http://www.leominsteroma.org/map-directions.htm> >

From the East: Take Route 2 West into Leominster (Johnny Appleseed Rest Area is on the right). Take exit 33 "I-190 Leominster Worcester" and stay to the left of the ramp and look for the sign "Mechanic Street Leominster". Then follow directions below...

From the South: Take I-190 West into Leominster and take exit 8B "Route 2 Boston". Approximately 50 yards down the ramp take the left exit marked "Mechanic Street Leominster" which turns into Mechanic Street at the bottom of the ramp. Then follow directions below...

From the West: Take Route 2 East to Leominster, bear right onto Exit 33 Route I-190 "Leominster / Worcester". Take exit 8 "Mechanic Street Leominster" to the bottom of the ramp. At the bottom of the ramp take a left onto Nashua Street and at the traffic light take a right onto Mechanic Street. Then follow directions below...

...Follow Mechanic Street for approximately 1/2 mile and take a left onto Fifth Street. Follow Fifth Street until you come to the first intersection and take a right onto Carter Street. The beige building on the corner of Fifth Street and Carter Street is the Emergency Management building, the main entrance is the glass door on Carter Street.

